

Listing of Claims:

What is claimed is:

1. (currently amended) A method for determining fluid chemistry of formation fluid in earth formation surrounding a borehole, the method comprising:

in a formation tester having a reagent container coupled to a fluids analyzer via a flow line, storing analytical reagent in a reagent container coupled to a fluids analyzer via a flow line;

transporting the formation tester downhole;

drawing formation fluid into the flow-line; and

while the formation tester remains downhole:

moving a reacted mixture of formation fluid and analytical reagent fluid through a spectral analyzer cell in the fluids analyzer; and

performing ~~reagent injection~~ spectral analysis on the reacted mixture.

2. (currently amended) A method according to claim 1, ~~wherein performing reagent injection spectral analysis includes including the further step of injecting reagent into formation fluid within the flow-line to create a mixture of formation fluid and reagent in the flow-line.~~

3. (original) A method according to claim 2, wherein injecting reagent includes injecting reagent using a syringe pump.

4. (original) A method according to claim 2, further comprising establishing and storing baseline optical density values for at least one wavelength prior to injecting reagent.

5. (original) A method according to claim 2, wherein injecting reagent includes injecting a predetermined volume of reagent.

6. (original) A method according to claim 5, further including adjusting the predetermined volume.
7. (original) A method according to claim 6, wherein adjusting the predetermined volume includes adjusting an injection period of time.
8. (withdrawn) A method according to claim 6, wherein adjusting the predetermined volume includes adjusting an injection pump rate.
9. (original) A method according to claim 5, wherein injecting reagent includes injecting reagent into a stopped formation fluid.
10. (withdrawn) A method according to claim 5, wherein injecting reagent includes injecting reagent into a flowing formation fluid.
11. (withdrawn) A method according to claim 2, wherein injecting reagent includes injecting reagent using wellbore overpressure.
12. (withdrawn) A method according to claim 11, wherein injecting reagent includes injecting reagent at a controlled rate using a restrictor.
13. (withdrawn) A method according to claim 11, wherein injecting reagent includes injecting reagent at a controlled rate using a throttle valve.
14. (withdrawn) A method according to claim 11, wherein injecting reagent includes injecting reagent for a controlled period of time.

15. (original) A method according to claim 2, wherein injecting reagent includes extracting formation fluid from a stopped flow-line.
16. (original) A method according to claim 15, wherein injecting reagent includes injecting a predetermined volume of reagent.
17. (original) A method according to claim 16, further including adjusting the predetermined volume.
18. (withdrawn) A method according to claim 17, wherein adjusting the predetermined volume includes setting an extraction pump rate.
19. (original) A method according to claim 17, wherein adjusting the predetermined volume includes setting an extraction time.
20. (original) A method according to claim 15, wherein extracting formation fluid includes using a syringe piston.
21. (withdrawn) A method according to claim 15, wherein extracting formation fluid includes using a flow-line pump.
22. (withdrawn) A method according to claim 15, wherein extracting formation fluid includes using a step piston.
23. (withdrawn) A method according to claim 22, wherein extracting formation fluid includes adjusting metering valve settings.

24. (original) A method according to claim 1, wherein storing reagent includes storing different reagents in first and auxiliary reagent containers.

25. (withdrawn-Previously presented) A fluids analyzer for analyzing formation fluid in earth formation surrounding a borehole, comprising:

a probe for receiving downhole formation fluid from earth formation;

a flow-line coupled to receive formation fluid downhole from said probe;

a reagent container in fluid communication with said flow-line;

spectral analyzer means, coupled to receive a mixture of formation fluid and reagent from said flow-line downhole, for analyzing said mixture to produce time-series spectral; and

computing means for determining a characteristic of formation fluid from said spectral_data.

26. (withdrawn) A fluids analyzer according to claim 25, wherein said reagent container is a syringe pump.

27. (withdrawn) A fluids analyzer according to claim 25, wherein reagent in said reagent container is exposed to wellbore pressure.

28. (withdrawn) A fluids analyzer according to claim 27, further comprising a syringe pump fluid container coupled to extract fluid from said flow-line.

29. (withdrawn) A fluids analyzer according to claim 27, wherein said reagent container is coupled to said flow-line by a restrictor.

30. (withdrawn) A fluids analyzer according to claim 27, wherein said reagent container is coupled to said flow-line by a throttle valve.

31. (withdrawn) A fluids analyzer according to claim 27, further comprising a step piston coupled to extract fluid from said flow-line.
32. (withdrawn) A fluids analyzer according to claim 31, further comprising a metering valve between said step piston and said flow-line.
33. (withdrawn) A fluids analyzer according to claim 25, further comprising an auxiliary reagent container in communication with said flow-line independently of a first reagent container.
34. (cancelled)